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EXAMINER

THAI, HANH B

ART UNIT PAPER NUMBER

2161

DATE MAILED: 05/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/724,606

Applicant(s)

BURLEIGH ET AL.

Examiner

Hanh B. Thai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed 2/28/05.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-40 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/28/05.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed February 25, 2004⁵ have been fully considered but they are not persuasive.

Applicant argues on page 16 that "Bentley not relevant prior art and a person skilled in the art of portfolio management would not look to the filed of engineering project management for methods to user for portfolio management." In response to applicant's argument, to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

"Test of obviousness is not whether features of secondary reference may be bodily incorporated into primary reference's structure, nor whether claimed invention is expressly suggested in any one or all of references; rather, test is what combined teachings of references would have suggested to those of ordinary skill in art."

In re Keller, Terry, and Davies, 208 USPQ 871 (CCPA 1981).

"Reason, suggestion, or motivation to combine two or more prior art references in single invention may come from references themselves, from knowledge of those skilled in art that certain references or disclosures in references are known to be of interest in particular field, or from nature of problem to be solved;" *Pro-Mold and Tool Co. v. Great Lakes Plastics Inc.* U.S. Court of Appeals Federal Circuit 37 USPQ2d 1626 Decided February 7, 1996 Nos. 95-1171, -1181

"[q]uestion is whether there is something in prior art as whole to suggest desirability, and thus

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obviousness, of making combination." Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Company et al. U.S. Court of Appeals Federal Circuit 221 USPQ 481 Decided Mar. 21, 1984 No 83-1178.

Cwenar reference teaches a system for receiving, processing, creating, storing and disseminating investment information that multiple users access the server including portfolio management (see abstract of Cwenar), but not limited to the investment information, the system is used with mutual fund portfolio management and transaction information. Hence, Cwenar teach a system of sharing data by multiple users and a plurality of different programs (Cwenar, col.4, lines 4-29, col.5, lines 57-60 and col.6, lines 36-44).

In the related art, Armitage teaches a system and method for translating seismic data including the productivity of hydrocarbon exploration data information (Armitage, col.5, lines 7-22) and the data of Armitage's system collected from the different programs (Armitage, col. 3, lines 13-40). And Bentley is used as a referent for updating the related data input from multiple users (see col. 5, lines 44-63 and col. 9, lines 31-45, Bentley)

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the project management of Bentley into the system of Cwenar and Armitage to include a hydrocarbon-producing data into the portfolio management data in Cwenar including the updating the related data input from multiple users because it would have been to improve accuracy in hydrocarbon exploration and development (col.4, 13-14, Armitage).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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2. Claims 1-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the terminology "near real time" in independent claims 1, 15 and 21 render the claims indefinite.

Claim Objections

3. Claim 21 is objected to because of the following informalities: there is a typo in claim 21, the error of spelling "rel time". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7 and 15-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cwenar (U. S. Patent no. 5,893,079) of record in view of Armitage (U. S. Patent no. 5,475,589) of record and further in view of Bentley et al. (U. S. Patent no. 6,341,291) of record.

Regarding claims 1 and 21-22, Cwenar discloses at (FIG. 4) an information management system, comprising:

- a data repository (101, Fig.4, Cwenar) storing portfolio data tied to a key parameter field (FIG. 6; col. 7, lines 21-27 and col. 13, lines 19-60, Cwenar); and
- at least one application server (100) adapted to provide a plurality of applications (column 6, lines 36-39) to a plurality of users (126, 128, 130, 132, 134, 136, 138 and 140), the at least one application server (100) operatively coupled to the data

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repository (101), each of the applications adapted to generate at least some data having the key parameter field, the at least one application server (101) adapted to retrieve and update (column 5, lines 47-54 and column 6, lines 10-14, Cwenar) selected ones of the related data when ones of the applications use and generate application data having the key parameter field (see column 6, line 66 to column 7, line 3 and lines 24-25; abstract and FIG. 6 of Cwenar).

Cwenar, however, does not disclose that the related hydrocarbon-producing portfolio data. Armitage, on the other hand, discloses these limitations on (col. 4, lines 57-66; col. 5, lines 7-14 and col.7, lines 44-46, Armitage). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cwenar, as taught by Armitage. The motivation of doing so would have been to improve accuracy in hydrocarbon exploration and development (col.4, 13-14, Armitage).

Cwenar and Armitage combination does not disclose the updating data relating to a property in a real time environment based on input from multiple users different programs for different tasks. Bentley discloses a system for collaborative engineering having a plurality of asset team members each using a variety of tools or programs for collaborative projects (see col. 5, lines 44-63, Bentley) and updating related data (see col. 9, lines 31-45, Bentley). Therefore, it is obvious to one of ordinary skill in the art to apply the updating related data of Bentley into the combination system of Cwenar and Armitage. The motivation of doing so would have been to efficiently track and manage the changes (col.1, lines 15-24, Bentley).

Regarding claim 2, Cwenar/Armitage/Bentley combination further discloses the system wherein the data repository is adapted to store all data generated by each of the applications (see col.8, lines 46-50, Cwenar).

Regarding claim 3, Cwenar/Armitage/Bentley combination further discloses the system wherein the data repository comprises a plurality of databases each adapted to store data from a respective one of the plurality of applications (see col.14, lines 11-16, Cwenar).

Regarding claims 4 and 24, Cwenar/Armitage/Bentley combination discloses that the related data are relevant to a hydrocarbon-producing portfolio (see col. 4, lines 57-66; col. 5, lines 7-14 and col.7, lines 44-46, Armitage).

Regarding claim 5, Cwenar/Armitage/Bentley combination further discloses the system wherein the plurality of applications comprises at least one selected from the group of a database management application, a portfolio management application, and a portfolio forecast application (see col.7, lines 7-20, Cwenar).

Regarding claim 6, Cwenar/Armitage/Bentley combination further discloses at (Fig. 1 and Fig. 6) that the database management application comprises a front-end user interface (2, Fig. 1) operatively coupled to the data repository (4, Fig.1) and adapted to generate at least some data having the key parameter field when ones of the plurality of users enter data into the front-end user interface (Fig. 6, Cwenar).

Regarding claim 7, Cwenar/Armitage/Bentley combination further discloses the system at (FIG. 1 of Cwenar) wherein the front-end user interface (2) comprises a plurality of different application modules each directed to specific ones of the plurality of users (elements 22, 24, 26 and 28, Cwenar).

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Regarding claims 15 and 19-20, Cwenar discloses a management system (FIG. 4) for a hydrocarbon-producing portfolio, comprising:

- at least one server (100, Fig.4, Cwenar) adapted to serve a plurality of applications (column 6, line39) to respective users (126, 128, 130, 132, 134, 136, 138 and 140), each of the applications adapted to generate data corresponding to the respective user, at least some of the data generated by each application having a key parameter field (101, FIG. 4 and FIG. 6; col. 7, lines 21-27 and col. 13, lines 19-39, Cwenar) therein;
- a database management system (101, Fig.4, Cwenar) operatively coupled to the at least one server (100, Fig.4, Cwenar) and adapted to store at least some of the data generated by each application and update any of the stored data having the key parameter field when ones of the applications modify any of the stored data having the key parameter field (see column 6, line 66 to column 7, line 3 and lines 24-25; abstract and FIG. 6 of Cwenar);
- the at least one server adapted to serve the updated data to any other ones of the applications when the other ones of the applications retrieves the updated data having the key parameter field (column 5, lines 50-52; column 6, line 66 to column 7, line 3 and lines 24-25). The at least one business process model application adapted to automatically update the modeled data when any ones of the selected ones of the stored data are updated by operation of any of the other applications (see col.5, lines 47-54 and col.6, lines 10-14, Cwenar).

Cwenar, however, does not disclose that the related hydrocarbon-producing portfolio data. Armitage, on the other hand, discloses these limitations on (col. 4, lines 57-66; col. 5, lines

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7-14 and col.7, lines 44-46, Armitage). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cwenar, as taught by Armitage. The motivation of doing so would have been to improve accuracy in hydrocarbon exploration and development (col.4, 13-14, Armitage).

Cwenar and Armitage combination does not disclose the updating data relating to a property in a real time environment based on input from multiple users different programs for different tasks. Bentley discloses a system for collaborative engineering having a plurality of asset team members each using a variety of tools or programs for collaborative projects (see col. 5, lines 44-63, Bentley) and updating related data (see col. 9, lines 31-45, Bentley). Therefore, it is obvious to one of ordinary skill in the art to apply the updating related data of Bentley into the combination system of Cwenar and Armitage. The motivation of doing so would have been to efficiently track and manage the changes (col.1, lines 15-24, Bentley).

Regarding claims 16-18 and 26-27, Cwenar/Armitage/Bentley combination further discloses that the business process model comprises creating an optimized drilling schedule (col.11, lines 48-58, Armitage).

Regarding claim 23, Cwenar/Armitage/Bentley combination further discloses that a parent application comprising a plurality of application modules, each of the application modules directed to at least one of the respective users (see col.7, lines 57-64, Cwenar).

Regarding claim 25, Cwenar/Armitage/Bentley combination further discloses that applying at least one business process model to selected ones of the stored data to generate modeled data; and automatically updating the modeled data when selected ones of the stored data

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are updated by operation of any one of the served applications (see col.5, lines 47-54 and col.6, lines 10-14, Cwenar)

5. Claims 8-10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cwenar (U. S. Patent no. 5,893,079) or record in view of Armitage (U. S. Patent no. 5,475,589) or record, and in view of Bentley et al. (U. S. Patent no. 6,341,291) of record and further view of Dembo (U. S. Patent no. 5,148,365).

Regarding claim 8, Cwenar/Armitage/Bentley combination discloses all claimed limitations as discussed above, except a resources optimization program adapted to use the related data retrieved from the data repository to generate an optimized allocation of resources based on at least one selected criterion. Dembo, however, discloses these limitations at (see FIG. 1 and column 1, lines 33-35 and 39-45, Dembo). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cwenar/Armitage to include the claimed feature as taught by Dembo. The motivation of doing so would have been to use the system of Cwenar for optimally allocating available resources in portfolio management system (col.1, 4-7, Demo).

Regarding claim 9, Cwenar/Armitage/Bentley/Dembo combination further discloses the system wherein the selected criterion comprises at least one selected from the group of developing most profitable assets first, achieving a selected net cash flow, achieving a selected earnings, achieving a selected level of production, satisfying obligations on time, and developing assets to achieve the greatest net cash flow in a selected amount of time for a selected amount of capital (see FIG. 5a-d and col.1, lines 43-49, Dembo).

Regarding claim 10, Cwenar/Armitage/Bentley/Dembo combination further discloses the system wherein the applications server is adapted to automatically update selected ones of the related data when the resource optimization program generates optimized allocation of resources data (see col.8, lines 27-37, Dembo).

Regarding claim 11, Cwenar/Armitage/Bentley/Dembo combination discloses the forecast application couple to predict future performance of assets (see col.8, line26 to col.9, line 4 and col. 10, lines 10-17, Dembo). Therefore, the combination system discloses the portfolio forecast application is adapted to forecast future performance of assets based on the related data.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cwenar (U. S. Patent no. 5,893,079) in view of Armitage (U. S. Patent no. 5,475,589) and in view of Bentley et al. (U. S. Patent no. 6,341,291) or record and further in view of O'Shaughnessy (U. S. Patent no. 6,484,151).

Regarding claim 12, Cwenar/Armitage/Bentley combination discloses all of the claimed limitation as discussed above, except "the automatically notification at least one user when related data relevant to the at least one user has been updated in the data repository".

O'Shaughnessy, however, discloses this limitations on (Summary of O'Shaughnessy). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cwenar/Armitage/Bentley to include the claimed feature as taught by O'Shaughnessy. The motivation of doing so would have been to transmit the updated information to the users immediately.

7. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cwenar (U. S. Patent no. 5,893,079) in view of Armitage (U. S. Patent no. 5,475,589) and in view of Bentley

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et at. (U. S. Patent no. 6,341,291) or record and further view of Lu et at. (U. S. Patent no. 6,373,489).

Regarding claims 13-14, Cwenar/Armitage/Bentley combination discloses all of the claimed limitation as discussed above, except the members of an asset development team having different functions related to the development and management of assets in the portfolio, each member responsible for providing particular related data corresponding thereto. Lu, however, discloses these limitations on (col. 1, lines 14-21, Lu). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cwenar/Armitage/Bentley to include the claimed feature as taught by Lu to provide various specialists having different functions related to the management of assets. The motivation of doing so would have been to enhance the management system.

8. Claim 28-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bentley et al. (U. S. Patent no. 6,341,291) of record in view of Armitage (U. S. Patent no. 5,475,589) of record.

Regarding claim 28, Bentley discloses a method for managing a portfolio, comprising:
having a plurality of asset team members each using an application related to a function of the respective asset team member to generate data; the asset team members (see col. 5, lines 44-63, Bentley) comprising engineers (see col. 5, lines 44-50 and col. 6, lines 60-64, Bentley) and administrator (see col. 23, lines 29-36, Bentley); and automatically updating related data (see col. 9, lines 31-45, Bentley discloses a system for collaborative engineering having a plurality of asset team members each using a variety of tools or programs for collaborative projects).

Bentley, however, does not disclose that the related hydrocarbon-producing portfolio data. Armitage, on the other hand, discloses these limitations on (col. 4, lines 57-66; col. 5, lines

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7-14 and col.7, lines 44-46, Armitage). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Bentley, as taught by Armitage. The motivation of doing so would have been to improve accuracy in hydrocarbon exploration and development (col.4, 13-14, Armitage).

Regarding claim 29, Bentley/Armitage combination discloses a seismic interpretation application and a petroleum land management application and a drilling engineering application, and a portfolio optimization application (see col. 4, lines 57-66 and col. 5, lines 7-14; Fig. 3 and Fig. 20, Armitage).

Regarding claims 30 and 35, Bentley/Armitage combination further discloses that at least one business process model to select ones of the corresponding data to generate modeled data (see col. 19, lines 58-62, Lu and col. 4, lines 57-66; col. 5, lines 7-14 and col.7, lines 44-46, Armitage).

Regarding claim 31, Bentley/Armitage combination further discloses that at least one business process model comprises determining an optimized drilling schedule (see col.7, lines 42-44 and col. 11, lines 48-58, Armitage).

Regarding claim 32, Bentley/Armitage combination further discloses that at least one selected from product price forecasts and production predictions (see col. 6, lines 62-67, Armitage).

Regarding claim 33, Bentley/Armitage combination further discloses that at least one selected from developing most profitable assets first, achieving a selected net cash flow, achieving a selected earnings, achieving a selected level of production, satisfying obligations on

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time, and developing assets to achieve the greatest net cash flow in a selected amount of time for a selected amount of capital (see col. 4, lines 1-14, Armitage).

Regarding claim 34, Bentley/Armitage combination further discloses that at least one business process model comprises forecasting hydrocarbon production (see Fig. 3 and col. 2, lines 61-67, Armitage).

Regarding claim 36, Bentley/Armitage combination further discloses that at least one business process model comprises determining drilling costs associated with at least one prospectively drilled well (see col.3, lines 1-7, Armitage).

Regarding claim 37, Bentley/Armitage combination further discloses that the hydrocarbon-producing portfolio comprises existing and prospective well locations, petroleum land management information related to the existing and an prospective well locations, capital equipment disposed in the existing wells, capital equipment proposed for existing and prospective wells, and estimated hydrocarbon reserves in reservoirs penetrated by the existing and prospective wells (see col.7, lines 42-44, Armitage).

Regarding claims 38-40, Bentley/Armitage combination further discloses that the notifying at least one of the asset team members that corresponding data used by the one of the applications used by the at least one asset team member have been updated by operation of the other one of the applications used by at least one other asset team member (see col. 9, lines 31-45, Bentley).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh B. Thai whose telephone number is 571-272-4029. The examiner can normally be reached on 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh B Thai
Examiner
Art Unit 2161

May 18, 2005



UYEN LE
PRIMARY EXAMINER